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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/290,855	04/13/1999	ABDUL GHAFOR AKRAM	1233	1352

28004 7590 03/14/2003

SPRINT  
6391 SPRINT PARKWAY  
KSOPHT0101-Z2100  
OVERLAND PARK, KS 66251-2100

EXAMINER

PHAN, MAN U

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 03/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/290,855

Applicant(s)

Akram et al.

Examiner

Man Phan

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Apr 13, 1999
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-9, and 11-23 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-9, and 11-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

***Response to Amendment and argument***

1. This communication is in response to applicant's 12/30/2002 Amendment in the application of Akram et al. for a "Method and apparatus for simultaneous multiline phone and data services over a single access facility" filed 04/13/1999. The proposed amendment has been entered and made of record. Claims 4, 10 have been canceled per applicant's request, claims 1,-7, 12 have been amended, and new claims 20-23 have been added. Applicant's amendment to the pending claims have been considered but are not persuasive, and will be examined as discussed below. Claims 1-3, 5-9 and 11-23 are pending in the application

2. Applicant's amendment and argument to the rejected claims are insufficient to distinguish the claimed invention from the cited prior arts or overcome the rejection of said claims under 35 U.S.C.103 as discussed below. Applicants' argument with respect to the rejected claims have been fully considered, but they are not persuasive for at least the following reasons.

Applicant's argument with respect to the rejected claim 18 (page 20, last paragraph) that the cited references do not disclose the *"PSTN gateway servers that work in conjunction with wall units to multiplex and communicate telephone, fax, and data communications"*. However, claim 18 recited a computer program product containing computer-executable instructions for performing the same basis of steps and apparatus of the prior arts as discussed in the rejection of claims 1-3 under the rejection of Arimilli in

view of Neubauer. Furthermore, Arimilli et al. (US#5,682,386) is applied herein merely for the teaching of the data multiplexing network which multiplexes a plurality of asynchronous data channels with an asynchronous data stream representing compressed voice signals and/or facsimile signals onto a single synchronous data packet stream. The single synchronous data packet stream is then transmitted by a high speed statistical multiplexer over a composite link to a second site using a modified high-level synchronous data link control protocol with an overlay of a priority statistical multiplexing algorithm. The asynchronous data channels and the compressed voice channel and/or facsimile signals are demultiplexed and reconstructed for sending to other asynchronous computer terminals and to a standard telephone or facsimile analog port at the second site, respectively (See Figs. 5A-D and Col. 2, lines 33 plus). Arimilli teaches in Figs. 4A,B detailed block diagram showing the use of the multiplexor 300 of the present invention to combines both telephone (voice), facsimile through a variety of connections with data over a single composite link to a remote site, in which a data/voice/fax multiplexer 300a is configured to take voice information from telephone equipment, facsimile information from facsimile machines and asynchronous data from data terminal equipment (DTE) devices and combine this information and data for transmission over a single composite communications link. Data/voice/fax multiplexers 300a and 300b (generally referred to as data/voice/fax multiplexer 300) are identically configured for multiplexing and demultiplexing this data and information. The result of this connection allows telephone, facsimile and data communications between sites "A" and "B" in a method of communication which appears to users at both sites to be simultaneous and

transparent (Col. 4, lines 25 plus). Neubauer et al. (US#6,269,095) teaches a telecommunication gateway using Voice over IP application. The Voice over IP gateway bridges the public switched telephone network (PSTN) or integrated services digital network (ISDN) with the packet-switched data network (TCP/IP Local Area Network). Such a VoIP gateway is configured to provide IP call control and IP data transport, which includes compression/decompression of voice channels using G.723.1 vocoding (See Fig. 6; Col. 1, lines 11 plus, and Col. 3, lines 60 plus). Therefore, examiner maintains that the references cited and applied in the last office actions for the rejection of the claim 18 is maintained in this office action. Rejections for the amended and new claims as follows.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37

CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-3, 5-9, 11, 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arimilli et al. (US#5,682,386) in view of Neubauer et al. (US#6,269,095).

With respect to claims 1, 7, 20 and 23, Arimilli discloses a data multiplexing network which multiplex data, facsimile and compressed voice over a single composite link. Arimilli teaches in Fig. 4A a detailed block diagram showing the use of the data/voice/fax multiplexor 300a of the present invention to combines both telephone (voice), facsimile through a variety of connections with data over a single composite link to a remote site. The system including a sync modem 314 for exchanging communications signals with a communications network and for exchanging an incoming/outgoing digital signal with a statistical multiplexor 300a (Col. 2, lines 33-48 and Col. 5, lines 24 plus). Arimilli further teaches in Fig. 6C a detailed block diagram of the asynchronous channel cards, the aggregate cards and the voice/fax cards, respectively, of the high speed statistical multiplexor shown in Fig. 4 for the multiplexing a plurality of outgoing encoded signals from a plurality of telephone devices into the outgoing digital signal, and for demultiplexing the incoming digital signals into a plurality of incoming encoded telephone call signals (Col. 9, lines 45 plus).

However, Arimilli does not expressly disclose that at least one call processing element coupled to the statistical multiplexor for converting the plurality of incoming encoded telephonic call/outgoing phone signals into a plurality of incoming phone/outgoing encoded telephonic signals. In the same field of the endeavor, Neubauer discloses a gateway system 1000 in which the voice payload data processing unit 1008 may include a plurality of digital signal processors (DSP). Typically, one DSP handles the call processing (e.g., real-time vocoding, silence suppression, echo cancellation, DTMF filtering, and .mu.-law/a-law conversion) of three or four channels. The IP Network Interface 1002 performs IP Network packetizing for received voice payload data packets from the voice payload data packet unit 1008. This includes, for example, encapsulating the data using RTP, UTP, IP and Ethernet headers. The gateway system 1000 may support both voice and fax operations (See also Figs. 4, 6; Col. 1, lines 44 plus).

Arimilli and Neubauer do not disclose the bypassing elements positioned between the telephonic devices and the statistical multiplexor and operative to connect the telephonic devices either to the call processing element or to the network. Chack et al. (US#5,214,692) disclose a method for bypassing a telephone system such as an ACD (automatic call distributor) or a PBX (private branch exchange) control unit in the event of a system failure or a power failure. The invention more specifically allows telephones connected to the ACD or PBX to be used for incoming and outgoing calls during a control unit or power failure by connecting the telephones to a T1 span trunk (or other digital telephone line) to the central office (Fig. 1; Col. 1, lines 17-26).

Regarding claims 2, 3, 5, 8, 9, and 21-22 Neubauer further teaches a Voice over IP

gateway which bridges the public switched telephone network (PSTN) or integrated services digital network (ISDN) with the packet-switched data network (TCP/IP Local Area Network). Such a VoIP gateway is configured to provide IP call control and IP data transport, which includes compression/decompression of voice channels using G.723.1 vocoding. In addition, PSTN or ISDN call control and compression and packetization are provided, typically using G.711 vocoding (Fig. 1; Col. 1, lines 12 plus).

Regarding claims 6, 11, Neubauer teaches in Fig. 4A the basic elements connected to the statistical multiplexor 300a, including PCS 301a-301n which are connected to channel ports 302a-302n for exchanging the encoded signals with the data device, and wherein digital signals 303 are exchanged with a PC 301, the phone signals 310 are exchanged with a telephone 311a or a fax machine 312a (See Fig. 4A, Col. 3, lines 9 plus).

With respect to claims 18-19, This claim differ from claims Arimilli in view of Neubauer in that the claims recited a computer program product for performing the same basis of steps and apparatus of the prior arts as discussed in the rejection of claims 1-3. It would have been obvious to a person of ordinary skill in the art to implement a computer program product in Arimilli in view of Neubauer for performing the steps and apparatus as recited in the claims with the motivation being to provide the efficient enhancement to the exchanging communications signals for providing simultaneous multiline telephone and data calls, and easy to maintenance, upgrade.

One skilled in the art would have recognized the need for effectively and efficiently providing multiline telephonic and data services over a single access facility



using data multiplexing network, and would have applied Neubauer's novel use of the digital signal processor for encoding the incoming telephone channels into Arimilli's teaching of the high speed statistical communication multiplexers. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Neubauer's B-Channel synchronization for G-723.1 vocoding into Arimilli's data/voice/fax compression multiplexer with the motivation being to provide method for supporting the multiline telephonic and data services over a single access facility.

5. Claims 12-17 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arimilli et al. (US#5,682,386) in view of Neubauer et al. (US#6,269,095), and further in view of Rao (US#5,506,844).

Regarding claims 12, 14, Arimilli et al. and Neubauer et al. disclose the claimed limitations discussed in paragraph 8 above. However, Aramilli and Neubauer do not expressly disclose the claimed feature of a control coupled to the at least one call processor for controlling the call processor and for exchanging signaling information with the gateway switch. In the same field of endeavor, Rao teaches in Figs. 2 & 3 the block diagrams of a system using multiplexer for access to a communication channel, in which a system controller 250 coupled to call processor for controlling the call processor and for exchanging signaling information with the gateway switch (Col. 2, lines 2 plus, and Col. 6, lines 60 plus).

Regarding claims 13, 15, Arimilli teaches in Fig. 6C a router coupled to the

statistical multiplexor for routing packets to the Internet or other data service and wherein the set of multimedia calls includes at least one telephonic and at least one data calls (Col. 9, lines 45 plus). Neubauer further teaches a Voice over IP gateway which bridges the public switched telephone network (PSTN) or integrated services digital network (ISDN) with the packet-switched data network (TCP/IP Local Area Network). Such a VoIP gateway is configured to provide IP call control and IP data transport, which includes compression/decompression of voice channels using G.723.1 vocoding. In addition, PSTN or ISDN call control and compression and packetization are provided, typically using G.711 vocoding (Fig. 1; Col. 1, lines 12 plus).

Regarding claims 16-17, the SS7 network is critical to call processing, and the SS7 protocol provides both error correction and retransmission capabilities to allow continued service in the event of signaling point or link failures. Arimilli teaches in Figs. 5B-D the diagrams showing the data/voice/fax compression multiplexer in associated with the PSTN for the remote voice telephone and fax equipment.

One skilled in the art would have recognized the need for effectively and efficiently providing multiline telephonic and data services over a single access facility using data multiplexing network, and would have applied Rao's system controller for passing signals to the statistical multiplexor and Neubauer's novel use of the digital signal processor for encoding the incoming telephone channels into Arimilli's teaching of the high speed statistical communication multiplexers. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Rao's method for configuring a statistical multiplexor to dynamically allocate

communication channel bandwidth, and Neubauer's B-Channel synchronization for G-723.1 vocoding into Arimilli's data/voice/fax compression multiplexer with the motivation being to provide method for supporting the multiline telephonic and data services over a single access facility.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The De Vita et al. (US#4,547,880) is cited to show the communication control apparatus for digital devices.

The Kamoi et al. (US#6,026,098) is cited to show the line multiplexing system.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Mphan

02/18/2003

*MP*

A handwritten signature in black ink, appearing to read 'Huy D. Vu', with a long horizontal flourish extending to the right.

HUY D. VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600